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(54) **NMOS LOW CONCENTRATION DRAIN AND  
PMOS HALO IC PROCESS FOR CMOS  
TRANSISTOR**

(57) Abstract:

**PURPOSE:** To provide a new 'architecture' and structure for the source and drain regions of a CMOS transistor, using an N<sup>+</sup>LDD layer and an N<sup>+</sup>LDD introduction sequence for both NMOS and PMOS transistors.

**CONSTITUTION:** A polygate is used for a self-aligned transistor SAT mask, and an N-type dopant material with a relatively low dosage is introduced into the source and drain regions of a CMOS transistor. A low concentration N-type LDD layer N<sup>+</sup>LDD is formed in the source and drain region of an NMOS transistor, and a low concentration N-type halo layer PHLDD is formed in the source and drain regions of a PMOS transistor.

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